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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,019	04/01/2005	Tsuyoshi Koike	5000-5253	7810

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EXAMINER	
HU, RUI MENG	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/530,019	KOIKE ET AL.	
	Examiner	Art Unit	
	RuiMeng Hu	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04/01/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 April 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/01/2005, 11/17/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Preliminary Amendment

1. The present Office Action is based upon the original patent application filed on 04/01/2005 as modified by the preliminary amendment filed on 05/04/2005. **Claims 1-8** are now pending in the present application.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 04/01/2005 and 11/17/2005 have been considered by the examiner and made of record in the application file.

Drawings

4. **Figure 1** is objected to as failing to comply with 37 CFR 1.84(p)(5) because it does not include the reference sign **"A"** mentioned in the description **on page 10 line 16.**

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 1-3, 5, 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nakamura et al. (US Patent # 5201062)** in view of **Nohara et al. (US Patent # 5812673).**

Consider **claim 1,** Nakamura et al. clearly disclose an FM receiver, comprising: first detection unit (figure 6, signal strength detecting circuit 12) outputting an RSSI signal indicating intensity of a received radio wave; second detection unit (figure 6, FM demodulating circuit 16, HPF (high pass filter) 131, Noise Level Detector 132) outputting a detection signal corresponding to a high frequency component (high frequency

component outputted from HPF 131) included in an IF signal; arithmetic unit (figure 6, unit 15) outputting a signal obtained by subtracting (column 3 lines 19-20) a signal based on the detection signal from a signal based on the RSSI signal as a control signal (figure 6, output of control signal generating circuit 15); and control unit (figure 6, output of control signal generating circuit 15) controlling at least one of a stereo-noise control circuit (figure 6, SNC 111), a high-cut control circuit (figure 6, HCC 112) and a muting circuit, according to the control signal (figure 6, column 7 lines 19-30).

Nakamura et al. also disclose the control signal outputted from control signal generating circuit 15 is obtained based on the first detected signal and second detected signal in associating with a time constant (column 3 lines 1-18), as if the amount of control signal T decreases, the associating time constant would be shortened.

However, Nakamura et al. fail to specifically disclose to have first time constant setting unit setting a first time constant in the RSSI signal and second time constant setting unit setting a second time constant in the detection signal outputted by the second detection means.

In the same field of endeavor, Nohara et al. clearly disclose in a case where a short time constant is given for good followability with respect to the change in the direction that the separation degree becomes small, and a long time constant is given for poor followability with respect to the change in the direction that the separation degree becomes large (Column 51 lines 41-55), thus to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant

setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Nohara et al. into the art of Nakamura et al. as to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Consider **claim 2**, Nakamura et al. clearly disclose a noise eliminator (title) for an FM receiver, comprising: first detection unit (figure 6, signal strength detecting circuit 12) outputting an RSSI signal indicating intensity of a received radio wave; second detection unit (figure 6, FM demodulating circuit 16, HPF (high pass filter) 131, Noise Level Detector 132) outputting a detection signal corresponding to a high frequency component (high frequency component outputted from HPF 131) included in an IF signal; and arithmetic unit (figure 6, unit 15) outputting a signal obtained by subtracting (column 3 lines 19-20) a signal based on the detection signal from a signal based on the RSSI signal as a control signal (figure 6, column 7 lines 19-30).

Nakamura et al. also disclose the control signal outputted from control signal generating circuit 15 is obtained based on the first detected signal and second detected signal in associating with a time constant (column 3 lines 1-18), as if the amount of control signal T decreases, the associating time constant would be shortened.

However, Nakamura et al. fail to specifically disclose to have first time constant setting unit setting a first time constant in the RSSI signal and second time constant setting unit setting a second time constant in the detection signal outputted by the second detection means.

In the same field of endeavor, Nohara et al. clearly disclose in a case where a short time constant is given for good followability with respect to the change in the direction that the separation degree becomes small, and a long time constant is given for poor followability with respect to the change in the direction that the separation degree becomes large (Column 51 lines 41-55), thus to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Nohara et al. into the art of Nakamura et al. as to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Consider **claim 3, as applied to claim 1 above**, Nakamura et al. as modified by Nohara et al. fail to clearly disclose the first time constant is larger than the second time constant.

In the same field of endeavor, Nohara et al. clearly disclose in a case where a short time constant is given for good followability with respect to the change in the direction that the separation degree becomes small, and a long time constant is given for poor followability with respect to the change in the direction that the separation degree becomes large (Column 51 lines 41-55), thus to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Nohara et al. into the art of Nakamura et al. as modified by Nohara et al. as to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Consider **claim 5**, Nakamura et al. clearly disclose a noise elimination (title) method for a FM receiver, comprising: subtracting (figure 6, unit 15, column 3 lines 19-

20) a second detection signal which has size based on intensity of a high frequency component (figure 6, FM demodulating circuit 16, HPF (high pass filter) 131, Noise Level Detector 132, high frequency component outputted from HPF 131) of an IF signal from a first detection signal (figure 6, signal strength detecting circuit 12, a signal outputted from circuit 12) which has size proportional to intensity of an IF signal and using a result of the subtraction (column 3 lines 19-20) as a control signal (figure 6, control signal outputted from control signal generating circuit 15); and controlling at least one of a stereo-noise control circuit (figure 6, SNC 111), a high-cut control circuit (figure 6, HCC 112) and a muting circuit, based on the control signal (figure 6, column 7 lines 19-30).

Nakamura et al. also disclose the control signal outputted from control signal generating circuit 15 is obtained based on the first detected signal and second detected signal in associating with a time constant (column 3 lines 1-18), as if the amount of control signal T decreases, the associating time constant would be shortened.

However, Nakamura et al. fail to specifically disclose to have first time constant setting unit setting a first detection signal and second time constant setting unit setting a second detection signal.

In the same field of endeavor, Nohara et al. clearly disclose in a case where a short time constant is given for good followability with respect to the change in the direction that the separation degree becomes small, and a long time constant is given for poor followability with respect to the change in the direction that the separation degree becomes large (Column 51 lines 41-55), thus to have a short time constant

setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Nohara et al. into the art of Nakamura et al. as to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Consider **claim 7**, Nakamura et al. clearly disclose an FM receiver comprising: first detection means (figure 6, signal strength detecting circuit 12) for outputting an RSSI signal indicating intensity of a received radio wave (a signal outputted from circuit 12); second detection means (figure 6, FM demodulating circuit 16, HPF (high pass filter) 131, Noise Level Detector 132) for outputting a detection signal corresponding to a high frequency component (high frequency component outputted from HPF 131) included in an IF signal; arithmetic means (figure 6, unit 15, column 3 lines 19-20) for outputting a signal obtained by subtracting a signal based on the detection signal from a signal based on the RSSI signal as a control signal (figure 6, control signal outputted from control signal generating circuit 15); and control means for controlling at least one of a stereo-noise control circuit (figure 6, SNC 111), a high-cut control circuit (figure 6,

HCC 112) and a muting circuit, according to the control signal (figure 6, column 7 lines 19-30).

Nakamura et al. also disclose the control signal outputted from control signal generating circuit 15 is obtained based on the first detected signal and second detected signal in associating with a time constant (column 3 lines 1-18), as if the amount of control signal T decreases, the associating time constant would be shortened.

However, Nakamura et al. fail to specifically disclose to have first time constant setting unit setting a first time constant in the RSSI signal and second time constant setting unit setting a second time constant in the detection signal outputted by the second detection means.

In the same field of endeavor, Nohara et al. clearly disclose in a case where a short time constant is given for good followability with respect to the change in the direction that the separation degree becomes small, and a long time constant is given for poor followability with respect to the change in the direction that the separation degree becomes large (Column 51 lines 41-55), thus to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Nohara et al. into the art of Nakamura et al. as to have a short time constant setting

applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Consider **claim 8,** Nakamura et al. clearly disclose a noise eliminator (title) for an FM receiver comprising: first detection means (figure 6, signal strength detecting circuit 12) for outputting an RSSI signal indicating intensity of a received radio wave (a signal outputted from circuit 12); second detection means (figure 6, FM demodulating circuit 16, HPF (high pass filter) 131, Noise Level Detector 132) for outputting a detection signal corresponding to a high frequency component (high frequency component outputted from HPF 131) included in an IF signal; and arithmetic means (figure 6, unit 15, column 3 lines 19-20) for outputting a signal (figure 6, control signal outputted from control signal generating circuit 15) obtained by subtracting a signal based on the detection signal from a signal based on the RSSI signal as a control signal (figure 6, column 7 lines 19-30).

Nakamura et al. also disclose the control signal outputted from control signal generating circuit 15 is obtained based on the first detected signal and second detected signal in associating with a time constant (column 3 lines 1-18), as if the amount of control signal T decreases, the associating time constant would be shortened.

However, Nakamura et al. fail to specifically disclose to have first time constant setting unit setting a first time constant in the RSSI signal and second time constant

setting unit setting a second time constant in the detection signal outputted by the second detection means.

In the same field of endeavor, Nohara et al. clearly disclose in a case where a short time constant is given for good followability with respect to the change in the direction that the separation degree becomes small, and a long time constant is given for poor followability with respect to the change in the direction that the separation degree becomes large (Column 51 lines 41-55), thus to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Nohara et al. into the art of Nakamura et al. as to have a short time constant setting applies to second detection means in a case of high frequency noise occurs for a good follow up capability in controlling stereo separation, and a long time constant setting applies to first detection means in controlling rise and fall of the field intensity signal when a good follow up capability is not critical in consideration.

9. **Claims 4 and 6** are rejected re rejected under 35 U.S.C. 103(a) as being unpatentable over **Nakamura et al. (US Patent # 5201062)** as modified by **Nohara et al. (US Patent # 5812673)** in view of **Hirohisa et al. (US Patent # 4977615).**

Consider **claim 4, as applied to claim 1 above**, Nakamura et al. as modified by Nohara et al. fail to clearly disclose the high frequency component is due to multi-path noise.

In the same field of endeavor, Hirohisa et al. clearly disclose the high frequency component is due to multi-path noise (Column 3 lines 15-16).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Hirohisa et al. into the art of Nakamura et al. as modified by Nohara et al. as to eliminate all high frequency noises partly due to multi-path noise.

Consider **claim 6, as applied to claim 5 above**, Nakamura et al. as modified by Nohara et al. fail to clearly disclose the high frequency component is due to multi-path noise.

In the same field of endeavor, Hirohisa et al. clearly disclose the high frequency component is due to multi-path noise (Column 3 lines 15-16).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection techniques taught by Hirohisa et al. into the art of Nakamura et al. as modified by Nohara et al. as to eliminate all high frequency noises partly due to multi-path noise.

Conclusion

10. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:** Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RuiMeng Hu
R.H./rh
October 26, 2006

EDAN ORGAD
PATENT EXAMINER/TELECOMM.
10/26/06